

**ITEM 660.17XX M FURNISH AND INSTALL xxx mm X xxx mm TAPPING SLEEVE,
TAPPING VALVE AND VALVE BOX ASSEMBLY**

DESCRIPTION

Under this item the CONTRACTOR shall furnish and install tapping sleeve, tapping valve and valve box assemblies for water main and hydrant service connections as shown in the plans or as ordered by the Resident Engineer.

REFERENCES

ANSI/AWWA C110 - Ductile Iron and Gray Iron Fittings, 3 inch through 48 inch, for Water and Other Liquids.

ANSI/AWWA C111 - Rubber-Gasket Joints for Ductile Iron and Gray Iron Pressure Pipe and Fittings.

ANSI/AWWA C500 - Gate Valves, 3 inch through 48 inch NPS, for Water and Sewage Systems.

MATERIALS

TAPPING SLEEVES (DUCTILE)

MATERIALS

Sleeve: ANSI/AWWA C110.

Joints: ANSI/AWWA C111, mechanical joint with 125 pound tapping flange, rubber gasket.

Bolts: Cor-Ten or Usalloy.

Manufacturers (Ductile or Cast Iron Pipe)

1. Clow: Product #F-5205
2. Mueller: Product #H-615
3. Waterous.
4. Tyler: Product #5-149
5. M & H
6. U.S. Pipe: Product #T-9

Manufacturers (Asbestos Concrete Pipe)

1. Clow: Product #F-5207
2. Mueller: Product #H-619
3. Waterous

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TAPPING SLEEVES (STAINLESS STEEL)

MATERIALS

Sleeve: 18-8 Type 304 stainless steel.

Flange: CF8 cast stainless steel.

Bolts: Type 304 stainless steel.

Gasket: Full circumferential gasket.

Manufacturers

1. Power Seal: Product #3490-AS
2. Ford: Product #FTSS
3. Cascade: Product #CST-EX

TAPPING VALVES

Standard: ANSI/AWWA C500

MATERIALS

Non-rising stem.

Counterclockwise direction of opening.

Flange by mechanical joint ends.

Double O-ring stem seal.

51 mm square operating nut.

Flax stuffing box packing conforming to Federal Specification HH-P-106d.

304 stainless steel body and bonnet bolts.

Raised male face on tapping flange for alignment with tapping sleeve.

Flange Bolts: 304 stainless steel

MANUFACTURERS

1. American Darling.

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2. Clow.
3. M & H.
4. Mueller.
5. Kennedy.
6. U.S. Pipe.

VALVE BOXES

MATERIALS

133 mm diameter boxes.

All sections interchangeable with old Buffalo Foundry boxes, Style #5001.

Boxes coated with a petroleum-asphaltic material.

All box tops shall have the word "Water" casted into them.

Manufacturers - Gate and Tapping Valve Boxes:

1. Bibby-Ste-Croix
 - a. Regular Valve Box: 3 Piece Screw Type, B-5001.
 - b. Extensions: Screw Type, B-5050.
 - c. Risers: B-5180, B-5181 or B-5182.
 - d. Covers: "Water", B-5160.
2. Bingham & Taylor
 - a. Base: #6
 - b. Mid Section: Series 64 and 62.
 - c. Top Section: Series 54, 55 or 56.
 - d. Risers: Series #6016-B.
 - e. Covers: "Water".

CONSTRUCTION DETAILS

PREPARATION

Excavate existing main at tap location

Verify actual pipe size and material.

Remove dirt and scale on exterior of existing main.

INSTALLATION

Schedule tap with Monroe County Water Authority (MCWA) a minimum of two (2)

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working days in advance, through the Director of Operations (716) 442-2000. CONTRACTOR must submit a tap fee of \$350.00 prior to or at the time of scheduling the tap. MCWA will perform the tap.

Install tapping sleeve and valve in accordance with manufacturer's instructions. Maintain 914 mm separation from ends of sleeve to adjacent joints or fittings. Install a solid concrete block beneath valve for support and concrete thrust block behind the tapping sleeve.

Verify with MCWA in advance of tap that excavation provided is of sufficient size for tapping operations. If a larger excavation is required, excavate as directed by Resident Engineer. Excavate and provide sheeting and shoring and access to excavation in accordance with OSHA regulations.

Provide backhoe and operator to assist MCWA's Tapping Crew during tapping work. Provide flagmen and barricades when necessary. Operator of backhoe shall assist Tapping Crew with installation and removal of tapping machine.

Tapping Crew shall perform an air pressure test on the installed tapping sleeve and valve. Sleeve and valve shall maintain 1034 kPa for five (5) minutes with no leakage.

When tapping sleeve or tapping valve leaks, it is sole responsibility of the CONTRACTOR to remove, reinstall and replace, if necessary, tapping sleeve and tapping valve. Retest reinstalled or replaced sleeves and valves until they achieve satisfactory test results.

Set valve box carefully over valve stem. Top section shall be adjustable for elevation and base centered over operating unit. Adequately brace valve box to insure that it remains in the proper position during and after backfilling. CONTRACTOR shall maintain proper alignment and height of box until completion of the project.

METHOD OF MEASUREMENT

Quantity to be paid for shall be the number of tapping sleeve, tapping valve and valve box assemblies furnished and installed in accordance with the plans or as ordered by the Resident Engineer.

BASIS OF PAYMENT

Unit price bid shall include cost of all labor, materials and equipment necessary to complete the work. Excavation and backfill shall be paid for as specified in the proposal under separate items.

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Payment will be made under:

<u>Item No.</u>	<u>Item</u>	<u>Pay Unit</u>
660.1701 M	Furnish and Install xxx mm X xxx mm Tapping Sleeve, Tapping Valve and Valve Box Assembly	EA
660.1702 M	Furnish and Install xxx mm X xxx mm Tapping Sleeve, Tapping Valve and Valve Box Assembly	EA
660.1703 M	Furnish and Install xxx mm X xxx mm Tapping Sleeve, Tapping Valve and Valve Box Assembly	EA
660.1704 M	Furnish and Install xxx mm X xxx mm Tapping Sleeve, Tapping Valve and Valve Box Assembly	EA